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measure, by a majority of 27; 509 Members (exclusive of the tellers and the speaker) being in attendance.

We subjoin a brief view of the numbers for and against the measure, since the year 1813.

1813—For the Bill	-	245	
Against it	-	203	Majority 42
Total number of Voters		448	
1821—For the Bill	-	254	
Against it	-	243	Majority 11
Total	-	497	
Third Reading, Ayes		221	
Noes	-	192	Majority 19
Total	-	413	
1825—Ayes	-	268	
Noes	-	121	Majority 27
Total,	-	509	Exclusive of 4 Tellers and a Speaker.

By the foregoing table it will be seen, that the greatest Majority was in 1813, in a House consisting of 448 Members, when the Bill was lost in the Lords by a Majority of 4. The smallest Majority was in 1822, when the Bill was lost in the Lords by a Majority of 39. In 1825, the greatest number that have yet divided on this measure, it has been carried by a Majority of 27; which circumstance, if we were disposed to rest our hopes on the doctrine of numbers alone, we should regard as a more favourable omen of future success, than any which has occurred in the progress of this great question.

The truth is, though the actual Majority appears numerically less than in 1813, a comparison of the Majorities will prove the actual advance of the question:—

The Ayes in 1813 were	245
1821	254
1825	268

So that, in point of fact, the actual Majority in 1825 is 23 over 1813.

To Mr. Peel must be given great praise for his "Jury Consolidation Bill." This Bill introduces three amendments in the Jury law as it now exists, which we submit to the consideration of our readers, and of the importance of which, we conceive there can be but one opinion.

"The first of these is in the mode of summoning common juries. Hitherto juries have been summoned by the petty constable; hereafter, the list is to be made out, and the persons summoned by the churchwardens and overseers, a more respectable class of men, and more above any motive of interest.

"A second amendment is in the extension of the qualification of special jurors.—Under the existing law, no persons but esquires are qualified to serve on special juries, and the consequence is, that bankers, merchants, and immense capitalists in wholesale trades, have hitherto always been excluded. Mr. Peel proposes that all these classes of persons shall be hereafter competent to act as special jurors.

"But the third, and most important amendment in the existing law, is in the mode adopted to form, or as it is termed, to strike special juries. Upon this part of the subject, Mr. Peel proposes, and as a Minister of the King's Government, most patriotically and constitutionally proposes, that the names of all the persons qualified to serve on special juries in London and Westminster, and in every county in England, shall be written in a book, and be numbered one, two, three, &c. up to a hundred or more, according to the actual number of special jurors in a county. A number of cards equal to the number of persons so qualified to serve, should be then numbered in the same manner, one, two, three, &c.; which cards shall be put into a box or glass, and forty-eight of them drawn out, in the manner of a ballot, by an officer. These forty-eight to be reduced to twenty-four, in the manner now pursued."

LITERARY AND SCIENTIFIC INTELLIGENCE.

BELFAST INSTITUTION—COLLEGE DEPARTMENT.

ON Saturday last, the 30th April, the Tenth Session of the College Classes in this Seminary, terminated in the usual manner; with which many of our readers are acquainted, from the accounts that have frequently been given to the public. The Session continues six months, from 1st November till 1st May; and, at the close, all the classes are examined in the Common Hall, on the different courses of study which they have prosecuted. These examinations are open to the public, and

are attended by committees of different ecclesiastical Bodies, whose students are connected with the Institution, and by many literary gentlemen of other connections. The students are thus brought before the view of the public, particularly of their religious guardians and friends; and the prospect of this has an influence on their studies, during the whole period of their attendance. These examinations occupy nearly a week; and are followed by the distribution of premiums to those who excel in the answering, and in the general business of the classes during the session.

The distribution of premiums, by the Faculty, took place in the Common Hall, on Saturday last, in the presence of a great number of literary gentlemen, and others, who were attracted by the interesting scene. As our limits do not allow us to give the particulars of the proceedings, we shall merely notice the premiums of the greatest importance, and of the most general interest.

The gold medal, annually offered for the best Essay on a prescribed subject, was adjudged to Mr. Thomas Houston, one of the Mathematical assistants in the Institution, for an Essay on "Commerce; including a sketch of its history, and a view of its effects on Learning, Liberty, Population, Agriculture, and Government."

Premiums were also given to Mr. James Shields, of Lisburn, and to Mr. Joseph M'Alistair, of Templepatrick, for Essays on the Effects resulting from the Discovery of America, and of the Passage to India by the Cape of Good Hope—to Mr. Robert Patterson, of Belfast, for an account of Lough Neagh—and to Mr. William Dowlin, one of the Mathematical assistants in the Institution, for a Statistical Account of the Parish of Greyabbey.

Our readers are probably aware, that general certificates, or diplomas, corresponding to a degree in arts, are given by the Faculty to students, at the end of their literary and scientific curriculum; after a lengthened examination on Classics, Logic and Belles Lettres, Metaphysics and Moral Philosophy, Mathematics and Natural Philosophy.

Various arrangements are adopted for promoting emulation, and exciting to a wider range of study, which it may be useful to mention. These subjects are grouped together in three divisions: I. Classics; II. Moral Philosophy, Logic and Belles Lettres; III. Mathematics and Natural Philosophy. To each of these divisions, various collateral topics are added, on which those who distinguish themselves are allowed to be further examined; and a silver medal is given to the student who excels in each. On the present occasion, the medal for the first division was adjudged to Mr. John Hincks, of the Institution; the medal for the second, to Mr. Thomas Houston, already mentioned; and the medal for the third, to Mr. James Houston, of Lifford.

The following are some of the subjects, for the additional examinations in the different divisions, to which the candidates for these medals submitted. In Classics, Longinus on the Sublime was added to the usual course of Greek reading; and, in Latin, Cicero's Offices; of which works, the students were required to show a critical knowledge. In the second division, besides the subjects illustrated in the lectures on Moral Philosophy, Logic and

Belles Lettres, the 4th book of Locke's Essay on Human Understanding; and Johnson's Lives of Cowley, Milton, and Pope; were prescribed for additional examination. In the examination on the first work, the object was to ascertain whether the students had an accurate knowledge of Locke's opinions, and could apply to their elucidation the most approved principles of modern Intellectual Philosophy; and in the second, to ascertain their recollection of the facts and dates mentioned, their knowledge of the general principles of criticism introduced, and their acquaintance with the works of the poets to which a reference is made. In the third division, in addition to the junior course of Mathematics, the students were examined on Spherical Trigonometry, the Theory of Conic Sections and other Curves, with the Elements of the Differential and Integral Calculus. Questions were also proposed, arising out of the usual course of Natural Philosophy.

At the examinations on MATHEMATICS, the following questions, out of many others, were all answered by the Students.

On the Junior Mathematical Course.

1. Given the perimeter and altitude of an isosceles triangle; to construct it.
2. Given the diagonals and the ratio of the sides of a parallelogram; to construct it.
3. If a tangent drawn through the vertex of a triangle inscribed in a circle, meet the base produced, the line bisecting their angle of intersection cuts the sides of the triangle in such a manner, that each of the segments next the vertex, is a mean proportional between the segments next the base. Required a proof.
4. If the vertical angle of a triangle be double of one of the angles at the base, the rectangle under the sides is equal to the rectangle under the base and the line bisecting the vertical angle.
5. Given the base, the difference of the sides, and the difference of the angles at the base of a plane triangle; to construct it.
6. In a given circle, to inscribe a rectangle having its sides in a given ratio.
7. Prove the fourth proposition of the second book of Euclid by proportion.
8. On a given base to construct a triangle having its other sides in a given ratio, and its area a maximum.
9. Prove that the segments of the base of a triangle made by a perpendicular, are proportional to the cotangents of the adjacent angles at the base; and show from this a method of resolving a triangle, when two sides and the contained angle are given.
10. Prove the third proposition of the sixth book of Euclid by trigonometry.
11. Prove that the base of a plain triangle is to the sum of the sides, as the co-

sine of half the vertical angle is to the sine of half the difference of the angles at the base.

12. Prove that the base of a plain triangle is to the difference of the sides, as the cosine of half the vertical angle is to the sine of half the difference of the angles at the base.

Resolve the following equations:—

$$13. \frac{3x^2 - 8x + 2}{x - 3} = \frac{6x^2 + 13x - 4}{2x}$$

$$14. x = a + \sqrt{(3x^2 - 4a^2)}.$$

$$15. x - y = a, \text{ and } x^3 - y^3 = b.$$

$$16. \frac{3x^2 - 11x + 2}{x - 2} = \frac{6x^2 - 24x}{2x - 5}.$$

On the Senior Mathematical Course.

1. Prove that

$$\cos A = \frac{1}{2} \sqrt{(1 + \sin 2A)} - \frac{1}{2} \sqrt{(1 - \sin 2A)}$$

$$2. \text{ Prove that } \frac{\sin A + \sin B}{\cos B + \cos A} = \tan \frac{1}{2}(A + B)$$

$$3. \text{ Prove that } 4 \cos A^3 = \cos 3A + 3 \cos A.$$

4. In a plain triangle, prove from the formula $\cos A = \frac{b^2 + c^2 - a^2}{2bc}$, that the area is equal to $\frac{1}{2} \sqrt{s(s-a)(s-b)(s-c)}$, where $s = \frac{1}{2}(a+b+c)$.

5. In a spherical triangle, prove that the sines of the sides are proportional to the sines of the opposite angles, from the fundamental formula, $\cos a = \cos A \sin b \sin c + \cos b \cos c$.

6. Given the sun's declination at a given hour, on a given day, to find the latitude.

7. What two places on the tropic of Cancer are each 5,000 miles distant from Belfast?

8. Trace the mutations in the signs of the chord of a variable circular arc.

9. If two sides of a spherical triangle be each 45° , the cosine of the remaining side is equal to the square of the cosine of half the opposite angle.

10. If two angles of a spherical triangle be each 45° , the square of the cosine of half the remaining angle is equal to half the square of the cosine of half its opposite side.

11. In a right angled, isosceles, spherical triangle, the sine of one of the equal angles is to the sine of 45° , as the radius is to the cosine of half the hypotenuse.

12. To investigate the mode of finding the latitude and longitude of any of the heavenly bodies from its right ascension and declination; and conversely.

13. Given the latitude and longitude, or the right ascension and declination of two stars, to find their distance asunder.

14. Given the distances of a comet from two known stars; to find its latitude, longitude, right ascension, and declination.

$$15. \text{ Find the differential of } (a+x)^x$$

$$16. \text{ Find the integral of } dx \cdot \frac{x^3 + a^4}{x + a}.$$

17. Find the equation of the parabola, the focus being origin.

18. Find the subtangent of the hyperbola.

19. Find the subtangent of the curve whose equation is $x^2 y = a^3$

$$20. \text{ Find the area of the same curve.}$$

We regret that our limits do not allow us to notice the subjects prescribed for premiums, and the other proceedings of the Meeting, which must be interesting to all who observe the progress of literary institutions in this country; but we shall perhaps give some further particulars in our next Number.

AGRICUTURAL REPORT, FOR APRIL.

THE oldest inhabitant of this country, does not recollect a more favourable seed-time than that which we have experienced this year. The oats were all committed to earth in good time, and under the most promising circumstances. Nothing can be more delightful than the appearance of the country, since the late refreshing showers. Wheats are covering the ground with vigorous shoots; clovers and grasses are early and promising beyond precedent; and the culture of potatoes is more advanced than we recollect ever to have seen it at so early a period. We recommend an article on *Potatoe Culture*, in our present Number, to the serious perusal of our agricultural friends. It is written by an experienced

and most intelligent farmer; and we are persuaded, from our own knowledge, and from extensive inquiries, that his remarks are well founded. In addition to his observations, we would recommend the trial of an experiment which is said to have succeeded very remarkably in Scotland, viz. "Planting the rose-end of middle-sized Potatoes, at the distance of 9 or 10 inches, between each seed, in the drill." About one-third of the potato should be planted, without being farther cut. It is said that this mode will yield a larger and better crop, than any other; and also, that wherever it is pursued, curled stalks are very rarely to be found.

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